**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**WASHINGTON, D.C. 20460**

AUG 16 2007

**OFFICE OF PESTICIDES AND TOXIC SUBSTANCES**

**MEMORANDUM**

**DATE:** **August 16, 2007**

**SUBJECT:** Science Review in Support of the Registration of Z112-010, Containing 4.25% (S)-Methoprene [Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate]) As Its Active Ingredient.

**Decision Number:** 368777
**DP Number:** 341941
**EPA File Symbol Number:** 63823-LA
**Chemical Class:** Biochemical
**PC Code:** 105402
**Active Ingredient Tolerance Exemptions:** 40 CFR 180.1033
**MRID Numbers:** 47164401

**FROM:** Angela L. Gonzales, Biologist
Biochemical Pesticides Branch
Biopesticides & Pollution Prevention Division (7511P)

**TO:** Chris Pfeifer, Regulatory Action Leader
Biochemical Pesticides Branch
Biopesticides & Pollution Prevention Division (7511P)

~~**THE FOLLOWING CONTAINS CONFIDENTIAL BUSINESS INFORMATION**~~

## ACTION REQUESTED

In response to the request for additional information discussed in a memorandum from A.L. Gonzales to C. Pfeifer dated March 5, 2007 and relayed in a letter from BPPD to the registrant, the registrant has submitted a revised proposed label, revised Confidential Statement of Formulas dated June 6, 2007, information to support the registration in a cover letter dated June 22, 2007 and efficacy data in MRID 47164401.

## RECOMMENDATIONS AND CONCLUSIONS

**1. The product chemistry submission is ACCEPTABLE, pending resolution of the deficiencies listed below.**

1a. The registrant must indicate on the alternate WSP packaging CSFs that the sources of the WSP are alternate sources. This can be done by including the word "OR" after each source in box 10 "Components in Formulation" on the CSFs. Please refer to the manually corrected CSFs.

1b. On the alternate WSP packaging CSFs, the registrant must correct the typographical error concerning the Chemical Abstract Service number (CAS No.) of [redacted]

1c. Storage stability and corrosion characteristics data must be submitted upon completion.

**2. The product performance submission is ACCEPTABLE.**

MRID 47164401- ACCEPTABLE

3a. Acceptable efficacy data were submitted to support control claims against *Culex* mosquitoes for up to 36 days (water depth unknown).

3a1. The average water depth should be reported, but is not necessary for efficacy purposes at this time due to the previous submission of acceptable efficacy data which includes water depth in MRID 46876404.

3b. Studies conducted on the product in the field should be submitted to validate laboratory study results.

**4. The non-target submission is ACCEPTABLE.**

4a. The information provided to bridge data cited in MRID 46996312 to support the non-target/environmental fate data requirements for the end-use product (EP) is adequate.

## STUDY SUMMARIES

Product Chemistry (cover letter)

The CSFs were revised as requested by the Agency. There is a typographical error on the water soluble pouch (WSP) packaging CSFs [redacted]. A storage stability and corrosion characteristics study is in progress and will be submitted upon completion.

Product Performance (MRID 47164401)

*A Data Evaluation Record (DER) was not prepared for this study. The study is summarized below.

In a laboratory study, efficacy of Z112-010 (a.i., 4.25% S-methoprene) against *Culex quinquefasciatus* and *Culex restuans* mosquitoes (utilization of mosquitoes was dependent on availability) was tested over 45 days. Water-filled drums were treated once with Z112-010 at a rate equivalent to 2.5 lb of product/acre (0.087g pellets/drum). Treatment was made 24 hours prior to larval challenge. The water depth of the drums was not reported. Cohorts of late third or early fourth instar *C. quiquefasciatus* or *C. restuans* larvae were periodically added to the drums and monitored for dead larvae, dead pupae and live pupae. Live pupae were removed and contained in covered cups of treatment water. Cups were checked every 24 hours for dead pupae, incomplete emergence, and viable adults. Four larval challenges were made (including the initial challenge) to the control and experimental test drums. Environmental conditions were monitored adequately (pH, air and water temperature). Four replicates were conducted for each the control and experimental group. Adequate control data were submitted. In Z112-010 treated drums, inhibition of emergence of adult mosquitoes was an average of 100%, 100%, 96.8%, and 88.9% at 10, 23, 36 and 45 days post-treatment, respectively. In the untreated control drums, inhibition of emergence of adult mosquitoes reached a maximum of 11.1%, and an average of 8.3%.

Non-Targets (cover letter)

The rationale provided by the registrant to bridge the data from study provided in MRID 46996312 to support the environmental fate/non-target data requirement required by the Agency (specifically, estimated environmental concentration (EEC) data on the active ingredient) is adequate. The test substance in the study is the same formulation from which bridging is requested. The "4% Altosid Pellet" formulation cited in the study is the 4.25% Altosid product which is currently registered and supported by the same data. Based on the results of the submitted study, the concentration of the active ingredient is not expected to exceed the level of concern for non-target organisms when the product is used according to label directions.

cc: A. L. Gonzales, C. Pfeifer, BPPD Subject File, IHAD/ARS
A. L. Gonzales, FT, PY1, 8/16/2007

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**Chemical:** S-Methoprene

**PC Code:**
105402

**HED File Code:** 41500 BPPD Tox/Chem
**Memo Date:** 8/16/2007
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**Accession #:** 000-00-9003

HED Records Reference Center
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